DOCUMENT RESUME

ED 159 502 CG 012 670

AUTHOR Rohner, Ronald P.; And Others
TITLE Development and Validation of the Personality Assessment Questionnaire: Test Manual.
SPONS AGENCY Catholic Univ. of America, Washington, D.C.; Connecticut Univ. Research Foundation, Storrs.
PUB DATE May 78
NOTE 41p.; Best copy available

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS Adults; Children; *Personality Assessment; Personality Tests; *Psychological Tests; Research Projects; *Test Construction; *Test Reliability; Tests; *Test Validity
IDENTIFIERS *Personality Assessment Questionnaire

ABSTRACT

Data are presented evaluating the validity and reliability of the Personality Assessment Questionnaire (PAQ), a self-report questionnaire designed to elicit respondents' perceptions of themselves with respect to seven personality and behavioral dispositions: hostility and aggression, dependence, self-esteem, self-adequacy, emotional responsiveness, emotional stability, and world view. Two versions of the PAQ (in English and Spanish) have been developed, one for adults and a second for children. The child version is designed to be used with children from age 7-11. Adolescents and adults normally use the Adult PAQ. The validity and reliability of the Adult PAQ and Child PAQ (English versions) have been shown to be adequate. A sample of 147 college students was used to assess the validity and reliability of the Adult PAQ. A sample of 220 fourth and fifth graders was used to assess the validity and reliability of the Child PAQ. Internal consistency results and factor analysis results are reported for both testing samples. Concurrent, convergent, and discriminant validities of the scales were found to be adequate. Both versions of the PAQ are susceptible to social desirability and acquiescence in children's and adults' responses to some PAQ scales. (Author)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED159502

DEVELOPMENT AND VALIDATION OF THE PERSONALITY ASSESSMENT QUESTIONNAIRE: TEST MANUAL

Ronald P. Rohner
University of Connecticut

Jose M. Saavedra
Inter American University

Emeline O. Granum
Catholic University of America

May, 1978

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

R P Rohner

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

© 1978 by Ronald P. Rohner. All rights reserved

CG012670

BEST COPY AVAILABLE

PERSONALITY ASSESSMENT QUESTIONNAIRE (PAQ)

The Personality Assessment Questionnaire (PAQ) is a self-report instrument designed to assess an individual's perception of himself with respect to seven personality characteristics: (1) hostility and aggression, including physical aggression, verbal aggression, passive aggression, and problems with the management of hostility and aggression, (2) dependency, (3) self-esteem, (4) self-adequacy, (5) emotional responsiveness, (6) emotional stability, and (7) world view. Evidence is presented regarding the internal consistency as well as the concurrent, convergent, discriminant, and construct validities of these scales.

The PAQ was developed as a complement to the Parental Acceptance-Rejection Questionnaire (PARQ) which measures children's and adult's perceptions of parental acceptance and rejection (Rohner, Saavedra, and Granum, 1978). That is, as predicted by parental acceptance-rejection theory, parental warmth/affection, hostility/aggression, indifference/neglect, and undifferentiated rejection (as measured by the PARQ) are related to the personality and behavioral constructs measured by the PAQ (Rohner, 1975). The PAQ may be used in other contexts as well.

Two versions of the PAQ (in English and Spanish) have been developed, one for adults and a second for children. Both are written in the present tense and both ask respondents to reflect on their true--not ideal--behavior. The child version is designed to be used with children from seven through eleven years of age. Adolescents and adults normally use the Adult PAQ. Both versions of the PAQ assess individuals' current perceptions of themselves along the seven personality dimensions cited above.[1] It is important to keep in mind in the following definitions that individuals are not, for example, either dpendent or independent, but that all persons are dependent (or independent) to a certain extent or in varying degrees. This continuum-like quality of the behavioral and personality dispositions is not emphasized in the following definitions, but this fact of variability among individuals should not be overlooked.

---

[1] The Hostility/Aggression scale on the PAQ may be divided into five subscales:

Subscale	Adult Version Item(s)	Child Version Item(s)
i. Hostility	1	8
ii. Verbal Aggression	22,29,(43)	22
iii. Physical Aggression	36, (43), 50	15
iv. Passive Aggression	15	29
v. Problems with the Management of Hostility and Aggression	8, 57	1, 36

Hostility, Aggression, or Passive Aggression and Problems with the Management of Hostility and Aggression

Hostility and (Active) Aggression. Hostility is an emotional (internal) reaction or feeling of anger, enmity or resentment directed toward another person, situation or oneself. Hostility is expressed behaviorally (externally) in the form of aggression, an act which is intended to hurt someone or something, usually another person, but sometimes oneself.[2] Active aggression may be manifested verbally in such forms as bickering, quarreling, telling someone off, sarcasm, or by making fun of someone, criticizing him, humiliating him, cursing him or by saying thoughtless, unkind or cruel things. Aggression may be revealed physically by fighting, hitting, kicking, biting, scratching, pinching, throwing things or by other forms of destructiveness.

Passive Aggression. Passive aggression is a less direct expression of aggression in such forms as pouting, sulking, procrastination, stubbornness, passive obstructionism, bitterness, vindictiveness, irritability, and temper tantrums.

Problems with the Management of Hostility and Aggression. "Problems with the management of hostility and aggression" refers to the expression of these feelings in disguised or symbolic form such as worried preoccupation about aggression, aggressive fantasies or dreams, anxiety over one's own real or fantasied aggression, unusual interest in hearing or talking about violent incidents, or by an unusual concern about the real or threatened aggression of others. These feelings may be conscious (recognized) or unconscious (unrecognized) by the individual. In either case the person has difficulty coping with or expressing hostility or aggression.

Dependence

Dependence is the emotional reliance of one person on another for comfort, approval, guidance, support, reassurance or

---

[2]Aggression is distinguished from assertiveness. Assertiveness refers to an individual's attempts to place himself in physical, verbal, social or some other priority over others, for example, to dominate a conversation or a group's activities, or to insist upon or stress one's will over that of others. An individual may be assertive verbally, physically, or both. Forms of verbal assertiveness include making confident, declarative statements, sometimes without regard for evidence or proof, or pushing forward one's own point of view. Physical assertiveness includes various forms of offensive physical action. But when this offensive action (either physical or verbal) has the intention of hurting someone or something then it becomes aggression, not assertiveness. Thus aggression and assertiveness are often closely related forms of behavior, a major distinction being the intentionality of hurting.

decision making. Independence is the essential freedom from such emotional reliance.[3] The goal of dependency behavior among children is usually the elicitation of warm, affectionate attention from an adult. Indicators of dependency among children include clinging to their parent, attention seeking, becoming anxious, insecure, unhappy, weepy or whiney when they are separated from their parent, or waiting for or demanding the nurturant response of someone else (i.e., succorance).

Indicators of dependency among adults (as well as among children) include frequent seeking of comfort, nurturance, reassurance, support, approval, or guidance from others, especially those who are important to the individual such as friends and family members including parents. The dependent person attempts to solicit sympathy, consolation, encouragement or affection from friends when he is troubled or having difficulty. He often seeks to have others help him when he is having personal problems, and he likes to have others feel sorry for him or to make a fuss over him when he is sick or hurt. The independent person, on the other hand does not rely heavily on others for emotional comfort, support, encouragement or reassurance. He does not feel the need to evoke sympathy from his friends or family when he is troubled, and he does not often feel the need to seek reassurance, support, comfort, nurturance or guidance.

Overall the dependence scale on the PAQ emphasizes items dealing with individuals' desire to have sympathy or encourage-

---

[3]Some scholars (e.g., Beller, 1955; Heathers, 1955) prefer to conceptually distinguish "dependence" from "independence". They define the term dependence as it is defined in this manual, but they reserve the term independence for forms of behavior we call self-reliance. The contrast between these usages is essentially one of emotional versus instrumental reliance (or dependence) of one person upon another, a distinction that is not always easy to make behaviorally.

Investigators must be careful not to confuse independence with self-reliance. Self-reliance includes all behavior that is free from the supervision or guidance of other people (especially older people, for children). It involves a definite tendency to meet one's own instrumental needs without relying on or asking for help of others. Young children act self-reliantly when they take care of themselves, dress themselves, feed themselves, play away from home without supervision, acquire or prepare their own food, and bathe themselves. The child who says, "I'll do it myself," when asked if he needs help is behaving self-reliantly. Indicators of self-reliance among adults include all responses where an adult relies on his own skills or resources to execute a task. An adult who willingly takes the initiative to accomplish some novel task without seeking guidance, supervision or support is acting in a self-reliant manner. Self-reliance, then, is an instrumental (i.e., action or task oriented) response whereas (in)dependence is an emotional response.

ment from persons close to them when they are sick or having troubles. None of the items deals with two forms of behavior sometimes associated with dependency, viz., (a) proximity seeking--the desire to be near or in physical contact with another person--or, (b) approval seeking.

Self-Evaluation (Self-Esteem and Self-Adequacy)

Self-evaluation consists of feelings about, attitudes toward and perception of oneself, falling on a continuum from positive to negative. Self-evaluation consists of two related dimensions, self-esteem and self-adequacy.

Self-Esteem. Self-esteem is a global, emotional evaluation of oneself in terms of worth. Positive feelings of self-esteem imply that a person likes or approves of himself, accepts himself, is comfortable with himself, is rarely disappointed in himself, and perceives himself as being a person of worth, or worthy of respect. Negative self-esteem on the other hand implies that a person dislikes or disapproves of himself, is uncomfortable with himself, is disappointed in himself, devaluates himself, perhaps feels inferior to others, and perceives himself as being essentially a worthless person or as being worthy of condemnation.

Self-Adequacy. Self-adequacy is an overall self-evaluation of one's competence to adequately perform daily tasks, to cope satisfactorily with daily problems, and to satisfy one's own needs. Positive feelings of self-adequacy imply that a person views himself as being a capable person, able to satisfactorily deal with his daily problems, feels that he is a success or capable of success in the things he sets out to do; he is self-assured or self-confident and feels socially adequate.

Negative feelings of self-adequacy, on the other hand, imply that a person feels he is an incompetent person, unable to successfully meet or cope with the demands of day-to-day living. He lacks confident self-assurance, often feeling inept; and he sees himself as a failure and as being unable to successfully compete for the things he wants.

Emotional Responsiveness

Emotional responsiveness refers to a person's ability to freely and openly express his emotions, for example feelings of warmth and affection. Emotional responsiveness is revealed by the spontaneity and ease with which a person is able to respond emotionally to another person. That is, emotionally responsive people have little difficulty forming warm, intimate, involved and lasting attachments. Their attachments are not troubled by emotional constriction or defensiveness. They are able to easily act out their sympathy and other feelings on appropriate occasions. Interpersonal relations of emotionally responsive people tend to be close and personal, and such persons have little trouble responding emotionally to the friendship advances of others.

Emotionally unresponsive or insulated people, on the other hand, are able to form only restricted or defensive emotional involvements. They may be friendly and sociable but their friendships tend to be impersonal and emotionally unexpressive. Emotionally unresponsive people may be cold, detached, aloof, or unexpressive and they may lack spontaneity. They often have difficulty or are unable to give or receive normal affection, and under extreme conditions they may be apathetic or emotionally bland or flat.

Emotional Stability

Emotional stability refers to an individual's constancy or steadiness of mood and to his ability to withstand minor setbacks, failures, difficulties or other stresses without becoming emotionally upset. An emotionally stable person is able to maintain his composure under minor emotional stress. He is not easily or quickly excited or angered and he is fairly constant in his basic mood.

Emotionally unstable people, on the other hand, are subject to fairly wide, frequent and unpredictable mood shifts which swing from such poles as cheery to gloomy, happy to unhappy, contented to dissatisfied, or friendly to hostile. Such persons are often upset easily by small setbacks or difficulties, and they tend to lose composure under minor stress. Oftentimes emotionally unstable people also tend to be excitable or to get angry easily and quickly.

Evaluation of the World (World View)

World view is a person's often unverbalized, global or overall evaluation of life and the universe as being essentially a positive or negative place, that is as being basically a good, secure, friendly, happy, unthreatening place having few dangers (positive world view), or as being a bad, insecure, threatening, unpleasant and hostile, or uncertain place full of dangers (negative world view). World view refers to one's conception of and feelings about the basic nature of the cosmos and of life itself; it does not refer to a person's empirically derived knowledge of the economic, political, social or natural environment in which he lives.

STRUCTURE OF THE PAQ

The adult and child version of the PAQ contain seven scales designed to measure the seven personality characteristics described above. The adult version contains nine items per scale for a total of 63 items, and the child version contains six items per scale for a total of 42 items. The vocabulary in the child version is simplified and therefore more generalized than the adult version. For this reason it is preferable to use the adult version whenever possible. All items are arranged in

cyclical order as shown in the Adult Scoring Sheet in the Appendix.

Each questionnaire has a title page which should be read by adult respondents before they begin. A tape recording of the child version can be prepared with approximately seven second intervals between items. The tape should be played for children who are poor readers. Alternatively the instructions may be read aloud. In some cases the entire questionnaire may have to be read to poor readers, but respondents should be encouraged to complete the questionnaire by themselves if at all possible. If respondents (children or adults) have trouble using the tape because they fall behind, the recorder may be turned off briefly to let them catch up--thus extending the interval between items. It is important, however, that respondents do not dwell for any length of time on any particular item, since the object of the test is to get the respondent's first, overall reaction. Also, respondents should be reminded that there are no right or wrong answers to the items. And they should be encouraged to report how they <u>really</u> feel about themselves, not how they should like to be. The questionnaire may be administered not only individually but also in groups, since minimal monitoring is required.

It is essential that respondents--especially children--understand the nature of the response-options described below. The first two pages of the child version contain illustrations of the test items and response options. The first item in both the child and adult version is answered on the face page, but the child version contain three additional illustrations on a second page to make sure the child fully understands the nature of the task with the help of the test administrator if necessary. At this point test administrators must make sure that the child understands that he is first to ask himself whether an item is basically true or not true of himself, and then he is to decide which sub-option within each response category is most true of him, i.e., almost always true <u>vs</u>. sometimes true, or rarely true <u>vs</u>. never true.

In all cases, but especially for children, the test session should be kept relaxed and pleasant in order to elicit the most frank and candid answers possible. For children the test administrator should try to make a game (with serious intent) out of the questionnaire. If possible, however, the PAQ should be completed in a single, uninterrupted session.

The person administering the questionnaire must make sure that each respondent's name or code number and the date of administration are recorded on the front page. Also, at the bottom of each face page the person who administered the questionnaire should place his name.

<u>Response Options</u>

The adult and the child versions of the PAQ utilize the

same response options and scoring system, thus maximizing direct comparability between instruments. In both versions of the PAQ respondents are instructed to ask themselves if an item is basically true or untrue about the way they see themselves. If the statement is basically true they are instructed to ask themselves, "Is it almost always true?" or, "Is it only sometimes true?" If an item is basically untrue about the way they perceive themselves they are instructed to ask, "Is it rarely true?" or, "Is it almost never true?"

Scoring the PAQ

The items are scored as follows: ALMOST ALWAYS TRUE = 4; SOMETIMES TRUE = 3; RARELY TRUE = 2; ALMOST NEVER TRUE = 1:

TRUE OF ME		NOT TRUE OF ME	
Almost Always True	Sometimes True	Rarely True	Almost Never True
4	3	2	1

Reverse Scoring. All scales are designed so that a high score (for example a score of 4) indicates a maximum of the behavior that is predicted to be associated with parental rejection, namely high hostility, dependence (vs. independence), negative self-esteem, negative self-adequacy, emotional unresponsiveness, emotional instability, and negative world view. In order to minimize response acquiescence or agreement response-set, certain items in each scale as described below are phrased so that a high score (e.g., a score of 4) reveals independence (rather than dependence), positive self-esteem, emotional responsiveness, and so forth. To illustrate, a score of 4 (Almost Always True for item 24 in the adult version, "I feel pretty good about myself," reveals positive self-esteem rather than negative self-esteem. In order to make this and other items consistent with the weighting of the remaining items in the PAQ, these scores recorded on the questionnaire must be reverse-scored as follows when transferred to the scoring sheet:

4 becomes 1
3 becomes 2
2 becomes 3
1 becomes 4

Twenty items (32%) in the adult version, and thirteen items (31%) in the child version must be reverse scored as follows:

Scale	Items to Be Reverse Scored	
	Adult Version	Child Version
Hostility/Aggression[4]	none	none
Dependence	16, 44	16
Negative Self-Esteem	10, 24, 38	3, 31
Negative Self-Adequacy	11, 25, 39, 53	4, 18, 39
Emotional Unresponsiveness	19, 33, 54	12, 26, 40
Emotional Instability	20, 41, 62	34
Negative World View	14, 28, 42, 56, 63	7, 21, 42

All items in the PAQ are constructed to reveal at face value relevant behaviors in each of the seven scales as defined and operationalized earlier in this manual. That is, no indirect indicators are employed.

Total (Composite) PAQ Score

Often researchers find it useful to make an overall assessment of the "mental health" status of respondents.[5] This may be achieved on the PAQ by summing the seven scale-scores to form an overall or composite test-score: the higher a total-test score the more impaired an individual's emotional/behavioral functioning. Because the mean and standard deviation of the seven scale scores are likely to be somewhat different within most samples, researchers should normally convert scale scores to z

---

[4]None of the Hostility/Aggression items requires reverse scoring. In order to effectively describe low hostility/aggression (as would be indicated by a high score on a reverse-scored item) it would be necessary to phrase a statement in the negative; for example, "I do not get angry when someone does something to annoy me." Such sentence construction creates an ambiguity by introducing the possibility of a double negative (in relation to response option 1, "Almost Never True"). For example,

Item: I do not get angry when someone does something to annoy me.

Response option: Almost Never True (= 1)

Interpretation: It is almost never true that I do not get angry when someone does something to annoy me.

For many respondents a sentence with such a double negative is confusing and difficult to interpret. It is therefore unacceptable as a test item.

[5]As indicated earlier, the PAQ was designed originally to measure seven personality/behavioral dispositions universally associated with parental acceptance-rejection. Parental rejection tends to impair healthy emotional and behavioral functioning. That is, rejection affects one's "mental health". Thus individuals who achieve a high score on the PAQ have a poorer mental health status than persons who achieve low scores.

scores prior to summing the scale scores.

Interpretation of the PAQ

Occasionally a user of the PAQ will want to interpret the scores of a respondent or of a group of respondents. That is, a test user may want to evaluate the state of personality/behavioral functioning of some respondent(s). Information reported later in Table 2 provides descriptive data (e.g., the mean score and standard deviation for each scale) on the responses of a sample of 147 adult respondents and on a sample of 220 child respondents. Additional data regarding the possible extremes of scale scores, scale and total-test midpoints, and the possible extremes of responses on the total test are presented in Table 1.

TABLE 1

Possible Extremes of Scale Scores, Scale and Total-Test Midpoints, and Possible Extremes on the Total Test: PAQ

Scales	Scale Scores and Total-Test Scores		
	Lowest Possible	Highest Possible	Midpoint
Hostility/Aggression			
adult	9	36	21.5
child	6	24	15
Dependency			
adult	9	36	21.5
child	6	24	15
Negative Self-Esteem			
adult	9	36	21.5
child	6	24	15
Negative Self-Adequacy			
adult	9	36	21.5
child	6	24	15
Emotional Unresponsiveness			
adult	9	36	21.5
child	6	24	15
Emotional Instability			
adult	9	36	21.5
child	6	24	15
Negative World View			
adult	9	36	21.5
child	6	24	15
Total (Composite) Test			
adult	63	252	157.5
child	42	168	105

DEVELOPMENT OF THE PAQ

The PAQ was constructed on a rational-theoretical basis (Goldberg, 1972) in 1971. Several theoretically pertinent factors were taken into account as the test was constructed. First, cross-cultural evidence shows that humans everywhere manifest in varying degrees the behavioral dispositions measured in the PAQ (Rohner, 1975, 1977). Thus the PAQ scales are shown to have universal applicability.

Since the PAQ was constructed to be usable cross-culturally as well as within the U.S.A., two additional considerations guided the development of the instrument. First, the items within each scale must have common international referents, and second, the phraseology of the items must be decentered from standard, idiomatic American-English. These conditions were approximately satisfied through the following procedures: prior work on a cross-cultural survey using a world sample of 101 societies (Rohner, 1975) helped to elucidate classes of items having common international referents. The test items were then screened and decentered from idiomatic American-English in 1971 with the help of two Turkish anthropologists in collaboration with three American-English speakers. Subsequently over the next two years the child and adult versions of the instrument were piloted on small samples of English-speaking children and adults in New England to detect any further problems with the test instructions, test items, the response format, and so forth. Troublesome areas in the questionnaire--especially in the child version of the questionnaire--were corrected.

The adult version of the PAQ was administered in 1973 to 68 undergraduate students approximately evenly distributed by sex at the University of Connecticut. An item analysis was performed on the responses, including the correlation of each item with its respective scale score. Items with low scale-correlations were deleted or revised. The present version of the Adult PAQ was developed from this combined "rational-theoretical" and "internal" strategy of scale construction (Goldberg,1972). The child version was adapted on the basis of the item analysis of the Adult PAQ. It was then individually administered to a small sample of third-grade through fifth-grade children and further screened, especially for difficult vocabulary. Since 1973 continual pretesting has helped to detect items containing words that are troublesome for young children. The most intensive formal, statistical analysis of the validity and reliability of the PAQ (English versions) was initiated in the fall of 1975 for the Adult PAQ, and in the fall of 1976 for the Child PAQ. These analyses are described in the following section.

ANALYSIS OF THE VALIDITY AND RELIABILITY OF THE PAQ

Analysis of the validity and reliability of the PAQ was

guided by the standards outlined in the American Psychological Association's Standards for Educational and Psychological Tests (1974). For the adult version, undergraduate students ranging in age from 18 to 43 years, and with approximate mean age of 23 years, were recruited from a major university and from a community college in the Washington, D.C. metropolitan area. Respondents completed the PAQ (validity-study version) during class time. From the total of 161 respondents who answered the questionnaire, 14 were excluded because of incomplete returns. The final sample of 147 adult respondents consisted of 65 males and 70 females, plus 12 individuals who did not indicate their sex.

The sample for the child version was drawn from fourth and fifth grade students (9 through 11 years old) in three metropolitan Washington, D.C. parochial schools. Of the 332 potential respondents, 93 did not participate because of absences or the lack of parental consent. Nineteen children in the remaining sample of 239 were excluded because of incomplete returns. Thus the final sample consisted of 220 respondents, 118 of whom were female and 102 were male. The questionnaires were group-administered during class time. The questions were read aloud to the fourth graders, but the fifth graders completed the questionnaire by themselves. The test administrators were available in the fifth grades to respond to questions on an individual basis.

Table 2 reveals the basic descriptive characteristics (i.e., scale means, standard deviations, spread of subjects' responses to each scale, and the possible high and low scores for each scale of the child and adult versions of the PAQ). The table includes the same information for each of the external validation scales used to measure concurrent validity in the validity-study version of the PAQ. As an indication of the form and content of the test items, Table 3 presents one sample-item from each Adult PAQ scale, as well as one item from each validation scale used in the validity-study version. The Child PAQ scale-items are virtually the same as the adult items except for complexity of vocabulary.

The validity-study version of the PAQ is the modified version of the instrument produced for assessing the concurrent validity of the PAQ scales. The modification was created by inserting items in cyclical order from six already validated instruments.[6] (The pairing of the validation scales with the PAQ

---

[6]The validity-study version of the PAQ utilizes every item in all seven scales of the PAQ, but only a portion of the original items in most validation scales. The response format of the validation scales were adapted to the requirements of the PAQ.

TABLE 2

Descriptive Statistics for PAQ Scales (Validity-Study Version)

Scale		Mean	S.D.	Subjects' Responses High	Subjects' Responses Low	Possible Scores Highest	Possible Scores Lowest
PAQ							
Hostility/Aggression	adult	26.60	4.68	36	10	36	9
	child	13.37	3.57	23	6	24	6
Dependency	adult	20.69	4.71	33	9	36	9
	child	16.77	2.96	23	9	24	6
Negative Self-Esteem	adult	28.99	4.74	36	11	36	9
	child	12.23	3.39	24	6	24	6
Negative Self-Adequacy	adult	28.77	4.98	36	11	36	9
	child	13.34	3.33	21	6	24	6
Emotional Unresponsiveness	adult	25.94	4.99	36	14	36	9
	child	12.98	2.81	21	6	24	6
Emotional Instability	adult	24.88	5.24	35	12	36	9
	child	16.01	3.00	24	9	24	6
Negative World View	adult	29.14	5.24	36	14	36	9
	child	11.34	3.84	24	6	24	6
Validation Scales							
Social Desirability	adult	24.60	4.18	36	13	44	11
	child	15.85	2.71	23	7	24	6
Hostility	adult	40.62	6.58	56	26	60	15
	child	14.94	3.06	23	6	24	6
Help Seeking	adult	37.20	7.17	55	15	60	15
	child	15.41	2.84	24	8	24	6
Relaxed vs. Anxious	adult	22.12	5.45	39	10	40	10
	child	14.45	2.56	22	8	24	6
Trust vs. Mistrust	adult	11.38	2.67	20	5	20	5
	child	11.50	2.14	17	6	20	5
Acquiescence	adult	26.04	4.38	40	13	44	11
	child	17.43	2.54	24	9	24	6

TABLE 2 Continued

Scale		Mean	S.D.	Subjects' Responses High	Subjects' Responses Low	Possible Scores Highest	Possible Scores Lowest
Self-Esteem	adult	16.48	5.41	34	10	40	10
	child	13.55	3.05	21	6	24	6
Self-Regard	adult	7.56	1.99	15	4	16	4
	child	8.08	1.93	13	4	16	4

scales is indicated later in Table 5.) Three scales (i.e., validation scales) from Lorr and Youniss' (1973) Interpersonal Style Inventory (ISI) were used as external (i.e., criterion) measures of concurrent validity for three PAQ scales. In addition, one scale was drawn from each of the following instruments to assess the concurrent validity of three other PAQ scales: Shostrom's (1966) Personal Orientation Inventory (POI); Buss and Durkee's (1957) hostility inventory; Rosenberg's (1965) self-esteem scale. No external validation scale was available for assessing the concurrent validity of one PAQ scale, viz., Emotional Unresponsiveness.

In addition to these external scales assessing concurrent validity of the PAQ scales, selected items from two other scales were inserted into the PAQ for measuring potential response bias. Specifically, they were Crowne and Marlowe's (1960) social desirability scale, and Couch and Keniston's (1960) acquiescence scale.

Cronbach's coefficient alpha (Nunnally, 1967) was used as the principal measure of test reliability. Coefficient alpha is a measure of internal consistency of items within a scale. A high alpha indicates that all items in a scale are sampling the same content area. As shown in Table 4, Adult PAQ reliability coefficients (alpha) range from .73 to .85 with a median reliability of .81.[7] For the child version, alphas range from .46 to

[7]A prior study in 1975 of 58 students in a large New England University by Rohner and Cournoyer revealed a spread of alpha scores from .83 to .96, with a median coefficient of .905. Results of a comparable test on a sample of 47 respondents in a small semi-isolated fishing and mining community in Newfoundland should be reported soon.

TABLE 3

Sample Items from Each Scale (Adult Version)

Scale	Sample Item
PAQ Scales	
Hostility/Aggression	I have trouble controlling my temper.
Dependency	I like to be given encouragement when I have failed.
Negative Self-Esteem	I wish I could have more respect for myself.
Negative Self-Adequacy	I feel inept in many of the things I try to do.
Emotional Unresponsiveness	I feel distant and detached from most people.
Emotional Instability	I am cross and grouchy without any good reason.
Negative World View	I view the universe as a threatening, dangerous place.
Validation Scales	
Social Desirability	No matter who I am talking to, I am always a good listener.
Hostility	When I am mad, I say nasty things.
Help Seeking	When I am feeling low, I look for sympathy from friends.
Relaxed vs Anxious	I consider myself a relaxed person who seldom gets upset.
Trust vs Mistrust	When you trust people they live up to your expectation.
Acquiescence	It is a wonderful feeling to sit surrounded by your possessions.
Self-Esteem	I feel that I have a number of good qualities.
Self-Regard	I trust my ability to size-up a situation.

TABLE 4

Internal Consistency Reliability Coefficients (Alpha) for PAQ Scales (Validity-Study Version)

Scale	Coefficient Alpha Adult	Child
PAQ		
Hostility/Aggression	.73**	.66**
Dependency	.79**	.47**
Negative Self-Esteem	.81**	.66**
Negative Self-Adequacy	.83**	.63**
Emotional Unresponsiveness	.78**	.46**
Emotional Instability	.83**	.52**
Negative World View	.85**	.74**
ISI		
Help-Seeking	.83**	.26**
Relaxed	.82**	.14*
Trust	.70**	.14*
POI		
Self-Regard	.41**	.25**
Rosenberg's		
Self-Esteem	.87**	.58**
Marlowe-Crowne's		
Social Desirability	.58**	.42**
Couch-Keniston		
Acquiescence	.56**	.30**
Buss-Durkee		
Hostility	.73**	.32**

PAQ = Rohner's "Personality Assessment Questionnaire"
ISI = Lorr and Youniss' "Interpersonal Style Inventory"
POI = Shostrom's "Personal Orientation Inventory"

*$p < .05$
**$p < .001$

.74 with a median reliability of .63. However, it is significant that the alphas for the criterion scales used in the child version range from .14 to .58 with a median reliability of .30.[8] This fact helps to explain some of the problems encountered in the analysis of the child version discussed more fully below.

A measure of the concurrent validity of each PAQ scale is presented in Table 5 which shows that all Adult PAQ scales--with the exclusion of Emotional Unresponsiveness which has no

TABLE 5

Correlation Between PAQ Scales and Validation (Criterion) Scales

PAQ Scales	Validation (Criterion) Scales	r
Hostility/Aggression	Buss & Durkee's Hostility	
adult		.68**
child		.56**
Dependency	Help Seeking (ISI)	
adult		.78**
child		.38**
Negative Self-Esteem	Rosenberg's Self-Esteem	
adult		-.75**
child		-.67**
Negative Self-Adequacy	Shostrom's Self-Regard	
adult		-.53**
child		-.14*
Emotional Unresponsiveness	[No validation scale available]	
Emotional Instability	Relaxed vs Anxious (ISI)	
adult		-.83**
child		-.40**
Negative World View	Trust vs Mistrust (ISI)	
adult		-.50**
child		-.25**

*$p < .05$
**$p < .001$

[8]Further research is needed to determine if alphas are higher when the PAQ is administered individually to children. Analysis of this question on a sample of 15 individually administered questionnaires proved inconclusive because of the small n.

validation (criterion) scale--are significantly ($p<.001$) related to their respective validation scales. The same is true for the child version with the exception of the Negative Self-Adequacy scale which correlates with its criterion scale at the $p<.05$ level. This low correlation ($r = -.14$) seems to reinforce the initial expectation that Shostrom's Self-Regard is an only approximately adequate criterion for judging the concurrent validity of the PAQ Negative Self-Adequacy scale. No other appropriate scale was available, however, for assessing the concurrent validity of that scale.

Additional evidence regarding concurrent validity as well as convergent and discriminant validity is reported in Table 6 for the adult data and in Table 7 for the child data.[9] These tables are intercorrelation matrixes of each PAQ scale with (a) every other PAQ scale, and with (b) all validation scales. Concurrent and convergent validity are shown when each PAQ scale correlates significantly with its respective validation scale. Suggestive evidence for discriminant validity is provided when the correlation showing convergent validity is higher than the correlation between a given PAQ scale and any scale not designed to assess convergent validity. Thus the presumption of concurrent, convergent, and discriminant validity of a scale is heightened when the correlation coefficient between that PAQ scale and its validation scale is higher than the correlation between that PAQ scale and any scale in the same rows or columns shared by either of these scales.[10]

As shown in Table 6, three of the PAQ scales in the adult version (viz., Hostility, Dependency, and Emotional Instability) meet this stringent validation requirement. The

---

[9]Concurrent validity is a kind of predictive-validity without the time dimension. That is, concurrent validity is assessed by an outside criterion, that is by a second, known and validated measure. In the context of the research reported here, concurrent validity is essentially equivalent to convergent validity. Convergent validity implies that agreement exists between different measures of a single trait or construct. Discriminant validity, on the other hand, implies that two traits are distinguished from each other. Operationally this means that two measures of a single construct should correlate with each other more highly than either measure correlates with any other construct within an intercorrelation matrix.

[10]The rationale for this procedure is similar to the logic of the multitrait-multimethod technique proposed by Campbell and Fiske (1959).

TABLE 6

Multiscale Intercorrelation Matrix for an Assessment of Concurrent, Convergent, and Discriminant Validity of Adult PAQ Scales (Validity-Study Version)

Scale	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Hostility/Aggression															
2. Dependency	31														
3. Negative Self-Esteem	45	15													
4. Negative Self-Adequacy	36	18	87												
5. Emotional Unresponsiveness	31	-03	48	46											
6. Emotional Instability	54	32	59	62	30										
7. Negative World View	32	04	49	56	38	54									
8. Buss & Durkee's Hostility	68	19	30	25	21	34	26								
9. ISI Help Seeking	29	78	15	17	09	32	07	17							
10. ISI Relaxed vs Anxious	-44	-31	-64	-68	-31	-83	-52	-35	-29						
11. ISI Trust vs Mistrust	-19	-01	-31	-34	-20	-36	-50	-23	04	35					
12. Rosenberg's Self-Esteem	-22	-07	-75	-80	-43	-55	-55	-20	-04	67	34				
13. Shostrom's Self-Regard	-05	-15	-47	-53	-19	-47	-38	-10	-19	56	26	59			
14. Social Desirability	-59	-31	-44	-42	-36	-51	-35	-50	-24	55	43	43	24		
15. Acquiescence	54	23	23	24	10	45	22	48	19	-41	-31	-12	-05	-49	

Note: $r = .16$, $p < .05$; $r = .21$, $p < .01$; $r = .27$, $p < .001$.
Decimal points have been omitted from the table.

TABLE 7

Multiscale Intercorrelation Matrix for an Assessment of Concurrent, Convergent, and Discriminant Validity of Child PAQ Scales (Validity-Study Version)

Scale	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Hostility/Aggression															
2. Dependency	20														
3. Negative Self-Esteem	11	-22													
4. Negative Self-Adequacy	07	-00	52												
5. Emotional Unresponsiveness	25	-07	45	45											
6. Emotional Instability	48	14	27	22	38										
7. Negative World View	22	-13	45	39	38	28									
8. Buss & Durkee's Hostility	56	09	15	03	19	40	12								
9. ISI Help Seeking	07	38	-05	05	-12	-00	-13	06							
10. ISI Relaxed vs Anxious	-25	-09	-20	-26	-30	-40	-20	-26	-08						
11. ISI Trust vs Mistrust	-12	03	-20	-19	-26	-17	-25	-20	06	19					
12. Rosenberg's Self-Esteem	-21	06	-67	-58	-48	-41	-46	-22	00	28	23				
13. Shostrom's Self-Regard	-01	13	-11	-14	-14	-01	-09	07	05	12	07	13			
14. Social Desirability	-51	-07	-24	-22	-28	-38	-26	-43	-13	24	15	29	06		
15. Acquiescence	31	16	-07	-02	07	27	02	27	05	01	-10	-03	-30	-23	

Note: $r = .13$, $p < .05$; $r = .17$, $p < .01$; $r = .22$, $p < .001$.
Decimal points have been omitted from the table.

correlation of each of these scales with its respective validation scale is higher than any other coefficient in the same rows or columns as the relevant PAQ scales. The correlation between the Negative Self-Esteem scale and its criterion scale (Rosenberg's Self-Esteem) is -.75. However, one other correlation is higher than this in the Negative Self-Esteem column of the matrix. The correlation between Negative Self-Adequacy and Shostrom's Self-Regard is -.53, but five other coefficients belonging to the row or column of Negative Self-Adequacy are higher in magnitude.

A review of published instruments failed to reveal the existence of a scale analogous to PAQ's Negative World View. However, Lorr and Youniss' Trust Vs. Mistrust scale seemed conceptually to be a component of World View. Accordingly the Trust vs. Mistrust scale was selected as an approximate measure of concurrent validity for PAQ's Negative World View. The correlation between Negative World View and Trust vs. Mistrust is -.50; four other correlations in the rows or columns shared by this pair of coefficients are higher.

An analysis of the convergent and discriminant validity of the Child PAQ reveals results comparable to those of the adult version, but with all correlations being of a lesser magnitude in the child version. Hostility, Dependency, and Negative Self-Esteem on the Child PAQ all correlate most highly with their criterion scales. Negative Self-Adequacy correlates with Shostrom's Self-Regard at -.14, but seven other correlations in Negative Self-Adequacy's row and column are higher. Emotional Instability correlates with Lorr and Youniss' Relaxed vs. Anxious scale at -.40; two other correlations are higher in Emotional Instability's row and column. Negative World View correlates with Trust vs. Mistrust at -.25; six other correlations are higher in Negative World View's row and column within the intercorrelation matrix.

It is possible for any one or more of thirteen coefficients in a given PAQ scale's row or column (within the intercorrelation matrix) to exceed in magnitude the correlation between that scale and its validation scale. As noted above the presumption of discriminant validity of a construct (i.e., scale) is heightened insofar as the convergent-validation coefficient is higher than the other coefficients entered into by the PAQ scale. With the possible exception of the Negative Self-Adequacy scale on the Child PAQ, the discriminant validity of the PAQ scales has, overall, emerged from this analysis as reasonably good--especially the Adult PAQ scales.

These measures of internal consistency (reliability) and of concurrent, convergent, and discriminant validity all bear on the construct validity of the theoretical constructs underlying

the PAQ scales.[11] Additional evidence regarding the construct validity of scales is provided by factor analyses of the PAQ. Since single item reliability has been shown in psychometric theory to be low (Cronbach and Gleser, 1953), in this analysis items in each scale were grouped into clusters of three to five items. For the Adult PAQ, data from the scales in the validity-study version were rescored, yielding 43 subscores for each individual responding to the PAQ. These subscores were intercorrelated and subjected to a principal components factor analysis. The resultant factor matrix was rotated to an oblique solution with fits better the desiderata for a simple-structure factor loading matrix as advocated by Thurston (1947). Tables 8 and 9 show the matrix of factor loadings for the Adult and Child PAQ respectively. The first six factors extracted in the Adult PAQ (Table 8) account for 58% of the variance. The first factor is defined by high loadings on clusters: 7 through 9 (Negative Self-Esteem, PAQ), 10 through 12 (Negative Self-Adequacy, PAQ), 40 through 42 (Rosenberg's Self-Esteem) and 43 (Shostrom's Self-Regard). This factor represents the individual's overall Self-Evaluation. One of the three clusters defining Lorr and Youniss' Relaxed scale also loads on this factor.

The second factor is defined by clusters 4 through 6 (Dependency, PAQ), and by 29 through 32 (Lorr and Youniss' Help Seeking). Clearly, this factor may be labeled Dependency. The third factor is defined by its high loadings with clusters: 16 through 18 (Emotional Instability, PAQ), and by 33 and 35 (Lorr and Youniss' Relaxed vs. Anxious). This factor may be labeled Emotional Instability. One of the three Acquiescence clusters (i.e., cluster 37) also loads on this factor; cluster 34 of Lorr and Youniss' Relaxed vs. Anxious, however, does not load to criterion on the factor.[12] The fourth factor has high loadings on clusters 2 and 3 (Hostility, PAQ) and 25 through 28 (Buss and Durkee's Hostility), but not cluster 1 (Hostility, PAQ). This factor may be labeled Hostility/Aggression. One of the three Acquiescence clusters (i.e., cluster 38) loads negatively on this factor. The fifth factor loads highly on clusters 13 through 15 (Emotional Unresponsiveness, PAQ). Emotional Unresponsiveness had no concurrent validation scale in the validity-study version of the PAQ, so as expected, no other

---

[11] See Cronbach and Meehl (1955) for a discussion of the concept "construct validity".

[12] Adult PAQ factors were defined by loadings $\geq .55$; Child PAQ factors were defined by a less stringent criterion, namely loadings $\geq .45$. Overall, factor loadings in the Child PAQ were substantially lower than in the Adult PAQ.

TABLE 8

Factor Loadings Following Oblique Rotation of Data from the Adult PAQ (Validity-Study Version)

Scale	Cluster	Factors					
		I Self-Evaluation	II Dependency	III Emotional Instability	IV Hostility/ Aggression	V Emotional Unrespons.	VI Neg. World View
Host./Aggress.							
	1	05	-00	50	-35	-15	04
	2	21	15	05	-59	-11	-14
	3	-02	03	00	-71	-02	16
Dependency							
	4	15	70	29	09	-08	-02
	5	12	75	10	03	-20	01
	6	-11	84	-19	-08	12	-03
Neg. Self-Est.							
	7	-69	-18	15	-01	07	-05
	8	-71	-06	01	-04	-13	-05
	9	-76	09	-16	-22	-13	-02
Neg. Self-Adeq.							
	10	-56	-13	11	07	01	15
	11	-73	08	08	07	-06	06
	12	-84	09	-10	-07	-09	-10
Emot. Unrespon.							
	13	-04	-01	-24	-04	-73	28
	14	01	-11	11	17	-89	04
	15	-15	-01	-11	03	-89	-10
Emot. Instab.							
	16	-06	05	83	06	05	13
	17	-16	02	68	-09	-03	04
	18	-37	03	56	-01	12	15
Neg. World Vw.							
	19	17	04	18	14	-02	92
	20	-05	06	10	-04	-11	76
	21	-26	03	-04	-01	-04	73
Soc. Desir.							
	22	02	-08	-35	18	19	12
	23	-07	03	-11	28	24	-01
	24	44	-20	03	25	13	04
Host.							
	25	09	-01	24	-56	11	07
	26	-22	-04	-09	-77	09	-21
	27	-07	07	05	-76	-04	-04
	28	12	-22	-24	-82	21	28

TABLE 8 Continued

Factor Loadings Following Oblique Rotation of Data from the Adult PAQ (Validity-Study Version)

Scale	Cluster	Factors					
		I Self-Evaluation	II Dependency	III Emotional Instability	IV Hostility/ Aggression	V Emotional Unrespons.	VI Neg. World View
Help Seek.							
	29	-06	80	-25	06	23	11
	30	-16	73	-05	-00	11	-00
	31	12	86	09	-03	-08	00
	32	00	84	01	-03	08	07
Relaxed							
	33	36	-08	-58	03	03	-02
	34	56	-10	-40	01	-22	06
	35	39	10	-58	-03	-03	-02
Trust							
	36	14	07	-04	01	-06	-45
Acquies.							
	37	16	-10	82	-01	08	02
	38	11	-03	25	-55	15	-14
	39	10	-02	06	01	04	03
Self-Est.							
	40	83	21	-04	02	02	10
	41	91	02	10	-01	01	-03
	42	85	01	07	-03	10	-06
Self-Reg.							
	43	74	-10	-10	-16	-16	-01
Eigenvalues		7.2632	4.6968	3.984	3.7863	2.67	2.5821
Percentage of Variance Accounted for		16.89	10.92	9.62	8.80	6.20	6.00

Note: Decimal points have been omitted.

TABLE 9

Factor Loadings Following Oblique Rotation of Data from the Child PAQ (Validity-Study Version)

Scale	Cluster / Factors					
	I Self-Evaluation	II [Uninter-pretable]	III Dependency	IV Hostility/ Aggression	V Emotional Instability	VI Neg. World View
Host./Aggress.						
1	07	24	01	64	-02	-21
2	09	44	24	62	41	09
Dependency						
3	-09	-03	74	-10	11	07
4	-12	27	71	15	08	01
Neg. Self-Est.						
5	76	03	-15	25	09	-08
6	73	-04	-31	11	31	22
Neg. Self-Adeq.						
7	66	-17	05	05	18	-34
8	70	13	13	08	27	-07
Emot. Unrespon.						
9	60	28	-01	24	36	-18
10	31	-05	-32	10	51	-23
Emot. Instab.						
11	24	49	13	36	37	-08
12	26	29	02	20	70	-04
Neg. World Vw.						
13	57	24	-17	19	14	-53
14	48	32	-13	24	15	-58
Social Desir.						
15	-29	-37	-10	-63	-34	10
16	-17	01	-10	-71	-09	-02
Host.						
17	06	52	07	50	27	10
18	06	-16	-07	51	22	03
Relaxed						
19	-14	-00	-09	-10	-08	05
20	-22	03	-08	-13	-78	15
Trust						
21	-18	-08	09	-14	-22	49
Acquiesc.						
22	-06	31	02	21	04	67
23	08	64	21	18	12	06

TABLE 9 Continued

Factor Loadings Following Oblique Rotation of Data from the Child PAQ (Validity-Study Version)

Scale	Cluster	Factors					
		I Self-Evaluation	II [Uninter-pretable]	III Dependency	IV Hostility/ Aggression	V Emotional Instability	VI Neg. World View
Self-Est.	24	-65	28	-27	-16	-26	41
	25	-58	-43	-16	-18	-37	-03
Self-Reg.	26	-07	50	16	-20	-30	40
Help Seek.	27	08	-44	42	16	05	26
	28	05	06	64	17	-19	20
Eigenvalues		5.4978	3.2927	1.7149	1.6102	1.3011	1.0792
Percentage of Variance Accounted for		19.6	11.8	6.1	5.8	4.6	4.2

Note: Decimal points have been omitted.

scale (or cluster) loaded on this factor. This factor may be labeled Emotional Unresponsiveness. Finally, the sixth factor has high loadings for clusters 19 through 21 (Negative World View, PAQ). Lorr and Youniss' Trust vs. Mistrust does not load to criterion on the factor--even though it does load modestly on the factor at -.45. Factor six may be labeled Negative World view.

For the Child PAQ, the data from the scales in the validity-study version were rescored, yielding 28 subscores for each individual respondent. The factor loadings in the Child PAQ are consistently and substantially lower than on the Adult PAQ. The lack of clarity in the factor structure is partly explained by the low alpha coefficients, indicating limited internal consistency among the scales as perceived by children.[13] The first six factors extracted account for 52.1% of the variance, however the second factor which accounts for 11.8% of the variance is uninterpretable. Therefore, the effective variance accounted for by interpretable factors is 40.3%. The first factor is defined by high loadings on clusters: 5 and 6 (Negative Self-Esteem, PAQ), 7 and 8 (Negative Self-Adequacy, PAQ) and 24 and 25 (Rosenberg's Self-Esteem). Shostrom's Self-Regard failed to load to criterion (i.e., $\geq .45$) on this factor. Factor I of the Child PAQ may be labeled Self-Evaluation, as it was on the Adult PAQ. Cluster 9 but not cluster 10 (Emotional Unresponsiveness, PAQ) also loads on the factor, as does cluster 13 but not 14 (Negative World View, PAQ).

The second factor is uninterpretable. The third factor is defined by high loadings on clusters: 3 and 4 (Dependency, PAQ), and 28 but not 27 (Lorr and Youniss' Help Seeking). This factor seems to represent Dependency. The fourth factor is defined by high loadings on clusters: 1 and 2 (Hostility/Aggression, PAQ) and 17 and 18 (Buss and Durkee's Hostility). Accordingly this factor seems to represent Hostility and Aggression. However, clusters 15 and 16 (Social Desirability response bias) also load significantly but negatively on the factor. These loadings leave the interpretation of factor IV somewhat problematic. The fifth factor is defined by high loadings on clusters: 12 but not 11 (Emotional Instability, PAQ), and 20 but not 19 (Lorr and Youniss' Relaxed vs. Anxious). This factor seems to represent Emotional Instability. Cluster 10 but not 9 (Emotional Unresponsiveness, PAQ) also loads to criterion on factor V. The sixth factor is defined by high loadings on clusters: 13 and 14 (Negative World View, PAQ), and by cluster 21 (Lorr and Youniss' Trust vs. Mistrust). This factor may be labeled Negative World View. Cluster 22 but not 23 (Acquiescence response bias) also loads on this factor.

---

[13]In an attempt to clarify the ambiguities reported in the factor analysis of the child data, several factor analyses were performed but none showed a clearer factor structure than the one reported here.

Six of the seven personality constructs measured by the Adult PAQ, and five of the seven personality constructs measured by the Child PAQ emerged as interpretable factors in the factor analyses. That is, Dependency, Emotional Instability, Hostility/Aggression, and Negative World View emerged as distinguishable factors within both the Child and Adult PAQ; Emotional Unresponsiveness came out of the adult data, but it did not emerge as a distinct factor in the child data. Self-Esteem and Self-Adequacy emerged in both the adult and child factor analyses as a combined factor (i.e., Self-Evaluation). These two constructs (i.e., Self-Esteem and Self-Adequacy) were predicted in advance, however, to be theoretically related. Overall, then, the factor analyses of adult and child data provide moderately strong evidence regarding the construct validity of the theoretical constructs underlying the PAQ scales.

Finally, supporting evidence for the construct validity of the PAQ scales is shown by the results of an assignment in 1975 to four undergraduate students in Washington, D.C. The students learned the theoretical definitions of each of the constructs measured by the seven PAQ scales, and then they were given a shuffled deck of all 63 items in the Adult PAQ. The students were told to sort the items into seven piles, each pile containing nine items--one pile for each construct. The assignment resulted in raters making one sorting error in each of four scales (i.e., 97% accuracy), but all four raters sorted items perfectly (i.e., 100% accuracy) in the remaining three scales.

The evidence presented here supports the inference that, overall, the personality dispositions measured in the PAQ have concurrent, convergent, discriminant, and construct validity. Further support for this conclusion is provided in previous work (see Rohner and Katz, 1970; Rohner and Ness, 1975; Rohner, 1975).

RESPONSE BIAS AND SEX DIFFERENCES IN THE PAQ

Comparing Tables 10 and 11 with Tables 6 and 7 respectively, one sees that most PAQ scales are susceptible to both social desirability and acquiescence response tendencies, especially Adult PAQ scales. In only one case, however, does a significant relationship between a PAQ scale and its validation scale vanish as a result of this bias. More specifically, the correlation between Child PAQ's Negative Self-Adequacy and Shostrom's Self-Regard dropped from a significant zero-order correlation of .14 (see Table 7) to a non-significant correlation of .12 (Table 11) when the joint influence of social desirability and acquiescence was controlled for. Knowing that the PAQ is susceptible to response bias, users of the instrument should probably statistically control for the effects of response style whenever the PAQ is used.

As shown in Table 12 there are also significant sex differences in children's and adults' responses to some PAQ

TABLE 10

Partial Correlation Coefficients: Effects of Social Desirability and Acquiescence Response Styles Held Constant in Adult PAQ Interscale Correlation Matrix

	Scale	1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Hostility/Aggression													
2.	Dependency	14												
3.	Negative Self-Esteem	28	01											
4.	Negative Self-Adequacy	16	05	84										
5.	Emotional Unresponsiveness	18	-15	38	37									
6.	Emotional Instability	27	18	48	52	17								
7.	Negative World View	14	-09	40	48	30	44							
8.	Buss & Durkee's Hostility	50	01	10	05	06	10	09						
9.	ISI Help Seeking	17	76	04	08	-18	22	-02	04					
10.	ISI Relaxed vs Anxious	-12	-16	-54	-60	-16	-75	-42	-05	-18				
11.	ISI Trust vs Mistrust	15	17	-14	-18	-06	-15	-40	03	18	12			
12.	Rosenberg's Self-Esteem	01	07	-69	-77	-32	-47	-48	-02	06	60	21		
13.	Shostrom's Self-Regard	09	-09	-42	-50	-11	-46	-33	-01	-15	56	19	55	

Note: $r = .16$, $p < .05$
$r = .21$, $p < .01$
$r = .27$, $p < .001$
Decimal points have been omitted from the table.

TABLE 11

Partial Correlation Coefficients: Effects of Social Desirability and Acquiescence Response Styles Held Constant in Child PAQ Interscale Correlation Matrix

	Scale	1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Hostility/Aggression													
2.	Dependency	16												
3.	Negative Self-Esteem	02	-23											
4.	Negative Self-Adequacy	-03	-01	49										
5.	Emotional Unresponsiveness	14	-10	42	42									
6.	Emotional Instability	33	10	23	17	31								
7.	Negative World View	12	-14	41	35	33	21							
8.	Buss & Durkee's Hostility	41	04	08	-06	08	26	03						
9.	ISI Help Seeking	00	38	-09	02	-16	-06	-17	00					
10.	ISI Relaxed vs Anxious	-16	-09	-15	-21	-25	-37	-14	-20	-05				
11.	ISI Trust vs Mistrust	-09	02	-16	-15	-23	-16	-21	-18	08	16			
12.	Rosenberg's Self-Esteem	-09	08	-65	-55	-44	-35	-42	-12	04	22	19		
13.	Shostrom's Self-Regard	-03	10	-06	-12	-14	-05	-06	05	05	10	02	10	

Note: $r = .13$, $p < .05$
$r = .17$, $p < .01$
$r = .22$, $p < .001$
Decimal points have been omitted from the table.

TABLE 12

Sex Differences in Children's and Adults' Responses to the PAQ

Scale	Males Mean	Males S.D.	Females Mean	Females S.D.	t
Hostility/Aggression					
adult	26.95	3.85	26.59	5.18	.47
child	14.09	3.34	12.75	3.63	2.85**
Dependency					
adult	21.82	4.64	29.73	4.55	2.64**
child	16.45	2.98	17.04	2.92	-1.38
Negative Self-Esteem					
adult	30.06	4.06	28.10	5.12	2.45*
child	11.93	3.18	12.48	3.55	-1.22
Negative Self-Adequacy					
adult	30.38	4.01	27.50	5.43	3.49***
child	12.70	3.33	13.90	3.24	-2.67**
Emotional Unresponsiveness					
adult	25.80	4.55	25.64	5.37	.18
child	12.93	2.87	13.03	2.76	-.26
Emotional Instability					
adult	26.71	4.64	23.23	5.34	4.03***
child	16.03	2.94	15.75	3.04	.68
Negative World View					
adult	29.52	5.64	28.94	4.94	.64
child	11.23	3.99	11.44	3.72	.40

*p < .05
**p < .01
***p < .001

scales. For example, boys tend to be more hostile and aggressive than girls, but girls have more negative feelings of self-adequacy than boys, Regarding adults, on the other hand, men tend to have greater feelings of negative self-adequacy and self-esteem (i.e., negative self-evaluation) than women. Also, men manifest more dependency than women, and their responses show greater emotional instability than women's responses. In other respects adult males are not significantly different from adult females in their responses to the PAQ. These data suggest that users of the PAQ should control for sex differences in children's and adults' responses.

ACKNOWLEDGEMENTS

Research on which this manual is based was funded in part by the University of Connecticut Research Foundation, and in part by the Boys Town Center for the Study of Youth Development at The Catholic University of America. Many persons contributed to the development and assessment of the PAQ: Rohner authored all versions of the PAQ and supervised their subsequent validation; Saavedra was responsible for much of the formal statistical analysis of validity and reliability of the adult data in Washington, D.C.; Granum was responsible for most of the statistical analysis of validity and reliability of the child data in Washington, D.C.; Ali R. Balaman, Bozkurt Güvenç, Nancy Ness, and Robert C. Ness helped decenter the test items from idiomatic American-English; Leonard Katz, and especially David Cournoyer helped prepare the item analysis and other statistical analyses of validity and reliability in the New England sample; Mary Jeanne Verdieck helped with some of the computer operations in the analysis of the adult Washington, D.C. data. Finally, Saavedra translated both the child and adult versions of the PAQ into Spanish. Copies of the instruments are available from Ronald P. Rohner, Department of Anthropology, University of Connecticut, Storrs, Connecticut 06268 (U.S.A.)

REFERENCES CITED

American Psychological Association. Standards for educational and psychological tests. Washington, D.C.: American Psychological Association, Inc., 1974.

Beller, E. K. Dependency and independence in young children. Journal of Genetic Psychology, 1955, 87, 25-35.

Buss, A. H. and Durkee, A. An inventory for assessing different kinds of hostility. Journal of Consulting Psychology, 1957, 21, 343-349.

Campbell, D. T. and Fiske, D. W. Convergent and discriminant validation by the multitrait-multimethod matrix. Psychological Bulletin, 1959, 56, 81-105.

Couch, A. and Keniston, K. Yeasayers and naysayers: agreeing response set as a personality variable. Journal of Abnormal and Social Psychology, 1960, 60, 151-174.

Cronbach, L. J. and Gleser, G. C. Assessing similarity between profiles. Psychological Bulletin, 1953, 50, 456-473.

Crowne, D. P. and Marlowe, D. A new scale of social desirability independent of psychopathology. Journal of Consulting Psychology, 1960, 24, 349-354.

Goldberg, L. R. Parameters of personality inventory construction and utilization: a comparison of prediction strategies and tactics. Multivariate Behavioral Research Monograph, 1972, 72(2).

Heathers, G. Emotional dependence and independence in nursery school play. Journal of Genetic Psychology, 1955, 87, 37-57.

Lorr, M. and Youniss, R. P. An inventory of interpersonal style. Journal of Personality Assessment, 1973, 37, 165-173.

Nunnally, J. C. Psychometric theory. New York: McGraw-Hill, 1967.

Rohner, R. P. They love me, they love me not: a worldwide study of the effects of parental acceptance and rejection. New Haven: HRAF Press, 1975.

Rohner, R. P. and Cournoyer, D. Measurement of the antecedents and consequences of parental acceptance and rejection: reliability in two research questionnaires. (Research report in the Rejection-Acceptance Project.) Unpublished manuscript, University of Connecticut, 1975.

Rohner, R. P. and Katz, L. Testing for validity and reliability in cross-cultural research. American Anthropologist, 1970, 72, 1068-1073.

Rohner, R. P. and Ness, R. C. Procedures for assessing the validity and reliability data in cross-cultural research. JSAS Catalogue of Selected Documents in Psychology, 1975, 5, Winter (Ms. No. 856).

Rohner, R.P., J.M. Saavedra, and E.O. Granum. Development and validation of the parental acceptance-rejection questionnaire: Test manual. JSAS Catalogue of Selected Documents in Psychology, 1978, 8 (MS. No. 1635)

Rosenberg, M. Self-Esteem scale. Appendix D in M. Rosenberg, Society and the adolescent self image. Princeton, N. J.: Princeton University Press, 1965.

Shostrom, E. L. Personal Orientation Inventory. San Diego, Ca.: Educational and Industrial Testing Service, 1966.

Thurstone, L. L. Multiple factor analysis. Chicago: University of Chicago Press, 1947.

Appendix A

PAQ Adult Scoring Sheet

Name (I.D.#)_____

Date _____

Hostility/ Aggression	Dependency	Negative Self- Esteem	Negative Self- Adequacy	Emotional Unrespon- siveness	Emotional Instability	Negative World View
1___	2___	3___	4___	5___	6___	7___
8___	9___	*10___	*11___	12___	13___	*14___
15___	*16___	17___	18___	*19___	*20___	21___
22___	23___	*24___	*25___	26___	27___	*28___
29___	30___	31___	32___	*33___	34___	35___
36___	37___	*38___	*39___	40___	*41___	*42___
43___	*44___	45___	46___	47___	48___	49___
50___	51___	52___	*53___	*54___	55___	*56___
57___	58___	59___	60___	61___	*62___	*63___
Σ	Σ	Σ	Σ	Σ	Σ	Σ
Hostility/ Aggression	Dependency	Negative Self- Esteem	Negative Self- Adequacy	Emotional Unrespons- siveness	Emotional Instability	Negative World View

P A Q

Scoring Sheet: Child

Name (I.D.)_____

Date_____

Scale	Item						Row Sum
Hostility Aggression (001)	1___	8___	15___	22___	29___	36___	____
Dependency (002)	2___	9___	16*__	23___	30___	37___	____
Negative Self Esteem (003)	3*___	10___	17___	24*___	31*__	38___	____
Negative Self Adequacy (004)	4*___	11___	18*__	25___	32___	39*__	____
Emotional Unresponsiveness (005)	5___	12*__	19___	26*__	33___	40*__	____
Emotional Instability (006)	6___	13___	20___	27___	34*__	41___	____
Negative World View (007)	7*___	14___	21*__	28___	35___	42*__	____

* = Reverse Scoring